PHILIPS

CMND

CMND & CONTROL

User manual

Version 1.1
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1 CMND **Software Suite**

This manual will explain the ecosystem we use to maintain, configure and update our Professional TV portfolio.
Our CMND (pronounced “Command”) software suite has many more options as you can see below.
You can find the other manuals online as well.

Take control of your displays

Managing multiple displays can be a struggle. Whether it’s two screens, or a thousand, you don’t want to run around each display for every update. The CMND Display Management Platform puts you in control of all your Philips displays. With CMND, you can manage your full suite of displays from a central location.

CMND platform

CMND & CONTROL

Run your network remotely with CMND & Control
Ready for an easy way to manage multiple displays? CMND & Control lets you set parameters, update software and customize and configure multiple displays at once. From wherever you are.

CMND & CREATE

Optimize the customer experience with CMND & Create
CMND & Create is a powerful authoring tool for creating compelling content. With its drag and drop interface, preloaded templates and integrated widgets, you’ll be amazing customers with compelling stills and captivating video content in no time.

CMND & DEPLOY

Get setup fast with CMND
CMND & Deploy supports fast installation and easy development. width CMND & Deploy, you can add and remove settings via cloning and install apps remotely.

CMND & CHECK-IN

Personalize and interact with CMND & Check-In
CMND & Check-In transforms the hospitality experience, by increasing both personalization and efficiency. It comprises of surprise-and-delight touches like guest name on TV and guest-language input. Exciting features as messaging, bill on TV, express checkout, different channel packages and more.

2 **Requirements** before starting

Accessories needed

For full instructions on how to install the TVs please refer to the various installation manuals. Installation manuals and the latest TV software can be gotten from our support website.

Go to: http://www.philips.com/support

For any questions you may have not answered by this manual or any support issues you wish to register, go to our ticketing site:

Go to: https://philipspds.supportsystem.com/

To make changes to the setup of the TV and work with CMND & Control make sure that you have everything you need at hand.

22AV9573A

USB stick

Guest remote control 22AV1905A (IR)

You will need the master remote control or the guest remote control to access the menus. To access the setup menu, press the 'RC5 SETUP' or 'RC6 SETUP' key, and then press the 'Home/Menu' button.

For the guest remote control, press the following keys sequential: **3, 1, 9, 7, 5, 3, 'MUTE'.**

Note: *The sequence: 3,1,9,7,5,3, 'MUTE' will not show the Setup Menu if High Security Menu is enabled. Entering the professional menu will only work with a master remote. On our 5014/6014 it's also possible the professional mode is locked by an additional PIN code of your or your installer's choosing.*

For cloning settings from one TV to another TV or to CMND & Control, you will need to have a USB stick. This stick needs to be formatted as FAT32 and should be empty.

For the best guest experience check if the software version on the TV is the latest one. This can be done using the Master Remote control by pressing Recall/Info Button on the yellow remote or Info/CSM on the orange/green remote and checking on page '2.1 - Current Main Software'. This also can be done with the Guest Remote by pressing 1,2,3,6,5,4.

Go to: http://www.philips.com/support

Enter the model number and check to confirm you have the latest version available.

Confirm the software version present on TV is identical with the one from website. If not please download the latest version from website, unzip and save on to a USB key The USB key must be formatted as FAT32 and preferably empty to avoid any accidental upload of wrong setting and/or software. Follow the instruction how to upgrade the software.

If the software version from your TV is identical with the one available on website it is **not necessary to upgrade.**

If an upgrade is necessary you can upgrade and clone files at the same time automatically. (Upgrade -> Reboot -> Clone) --- See “Instant Initial Cloning” in the various installation manuals

CMND & Control hardware requirements

To run CMND & Control you will need
> A PC or Laptop running Windows (Windows 7 or 10)
> Required is at least 8 GB of RAM.
> The CMND software package
> A supported Dektec RF modulator card (For sending out clones and firmware over RF or coax-based installations, for IPTV no Dektec card is needed)
> Chrome browser

There are a large number of Dektec cards supported. Our main testing and therefore recommended use is with the following cards:
DTA 112, DTA 115 and DTU215 (USB version)

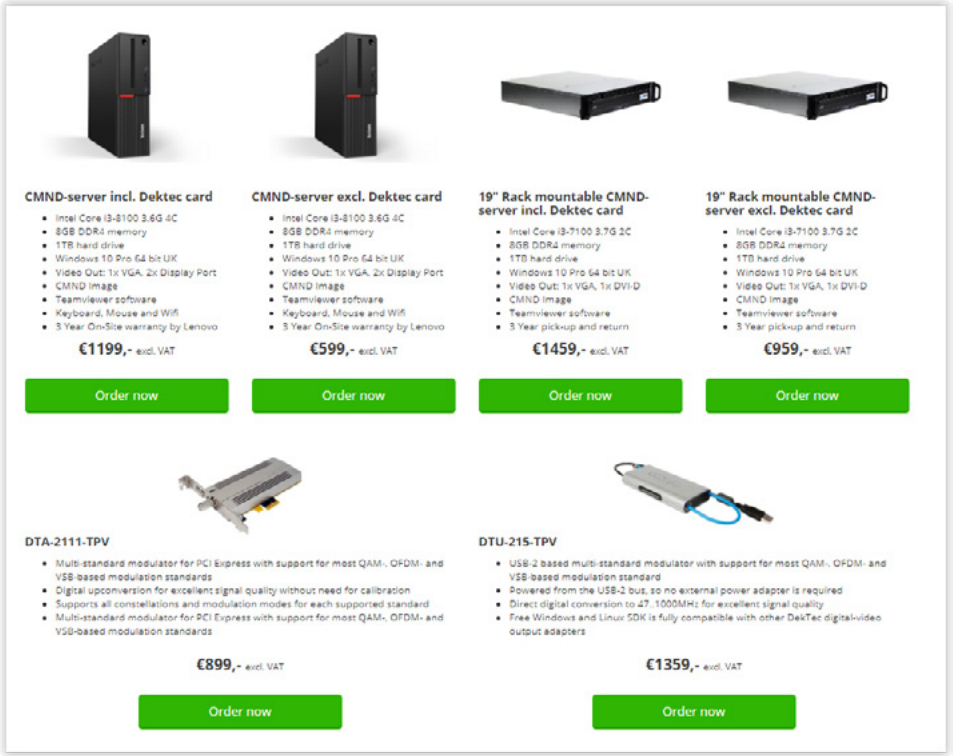
There is a large list of cards that work with our software. Cards such as the **DTA-111, DTA-2111, DTA-105 and DTA-102** are all reported to work. Not all of them have been tested. The following cards are the only cards confirmed NOT supported:
> DTA-2162
> DTU-236A
> DTA-2138
> DTA-2139
> DTA-PLUS
> DTA-2131

Retailer list where Dektec cards can be bought is available from
http://www.dektec.com/distributors/

Please make sure you have a PC installed in the hotel. The Dektec card should be connected to the RF network of the hotel. The CMND & Control server should be connected to the internet.

In case you are not proficient in configuring your own CMND server there is the option to procure it from our third-party supplier Paradigit (https://www.paradigit.nl/Smartinstall)

We have several configurations available so you can choose the one fits best for your client.



3 **TV settings** required for CMND & Control

The following settings need to be correct on the TV to make sure CMND & Control works properly and to its fullest capabilities.

The setup on TV will be determined by the main use of communication between the CMND server and the TV. You can make use of the RF network (unidirectional communication server to TV) or the IP network (bidirectional communication between server and TV but not available on some models like EasySuite).

RF

1. **Room ID** can help with upgrading all, a single or a group of TVs. For more information please check the chapter on “From CMND & CONTROL to TV”

2. **Modulation** type is dependent on the setting of the TV. Please see TV settings to check what is set in your TV. Please use 64QAM in both TV and CMND & Control. (DVB-T)

3. **Bandwidth** used can be 7 or 8 MHz and should correspond with the bandwidth used per channel in your network. This is TV installation country dependent. For most European countries this is 8 MHz For Australia this is 7 MHz, for New Zealand this is 8 MHz If you are unsure, please use 8 MHz

4. **Output level** in CMND & Control can help overcome noise or bad cabling in your hotel but can also introduces noise which can mean longer upgrade times or even stop CMND & Control from working. Recommended output level is -18dBm. Higher levels (>-18 such as -15) are only supported by PCI Dektec cards and if possible lower levels (-20dBm to -27dBm) are preferred. If some TVs in the hotel are not upgrading please test the SNR (Signal to Noise Ratio) at the TV. SNR should be at least 60dBu or higher for CMND & Control to work. If you do not meet this requirement and putting the output level higher does not work please contact Philips support.

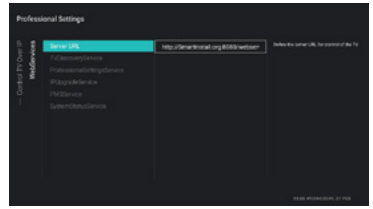
5. The **frequency** is default set to 498 MHz (from 2016 products onwards) both in the TV as well as in CMND & Control. Please make sure the frequency used is free and the channels around it are also free at least to the bandwidth used (7 or 8 MHz). If this setting is changed, it needs to be changed both in the TV as well as in CMND & Control as otherwise CMND & Control will not work.

6. **Installed countries** can help when sending clones or firmware to Easysuite 3009 or 3010 TVs installed with one of the following countries: Norway, UK, Sweden, Denmark, France, Finland, Ireland. Make sure country of installation in the TV is the same as in CMND & Control.

IP

1. **Network connection** needs to be configured and working properly. This can either be wired or wireless but for best customer experience we recommend using the wired interface.

2. Make sure all necessary services are turned on so that the TV can be discovered and can communicate with the server. Please make sure all **Webservices** (TvDiscovery, ProfessionalSettingsService, IPUpgradeService, PMSService and SystemStatusService) and all WeblisteningServices (PowerService, TVDiscoveryService, IPUpgradeService and PMSService).



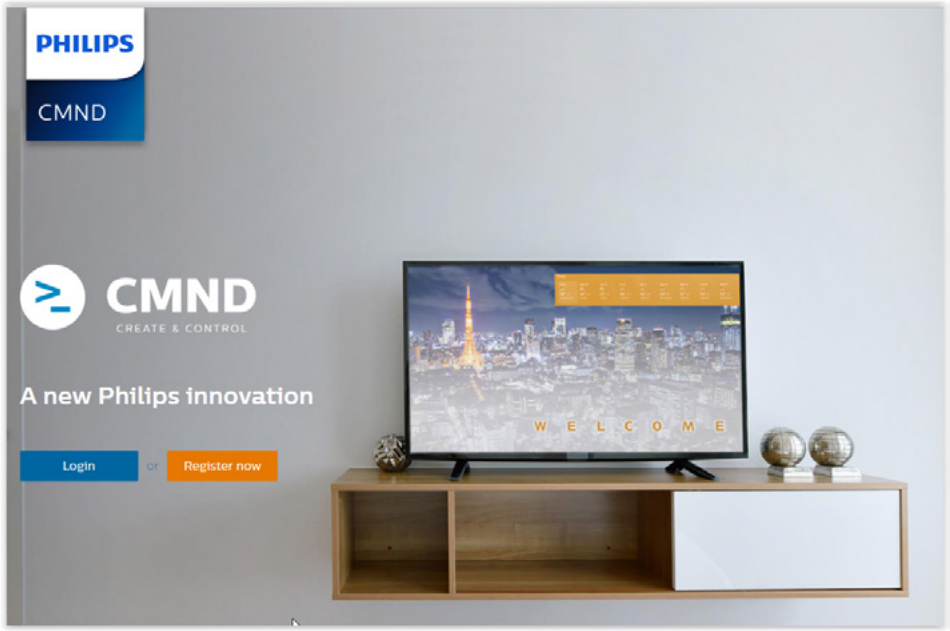
3. For easy TV detection you can configure the **WebserviceURL** in the masterclone file. The WebserviceURL will require following format: http://CMNDIPaddress:8080/webservices.jsp

4 **Installing** CMND

You can find the CMND & Control manual, software and other related information on the CMND & Control website. Go to https://CMND.io

Getting the software

When you first go to https://CMND.io you will need to register. Registration can be done by pressing on the registration button on the login page.



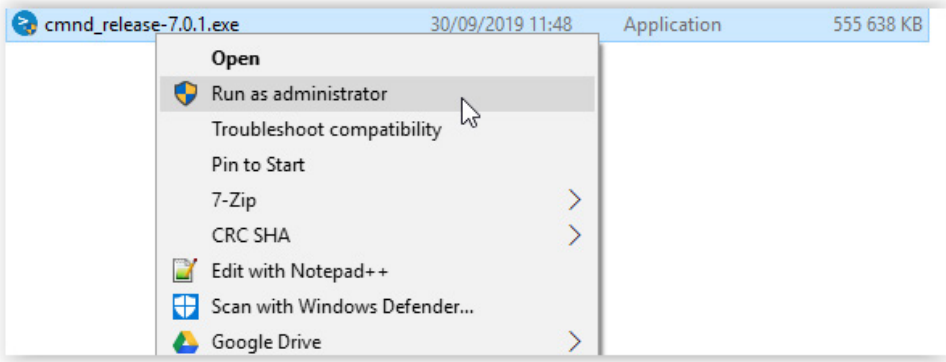
During registration you will be asked for your preferred username and for your email address. Recommendation is to use your email address as your username. Please make sure your email address is valid as your new password will be sent there!

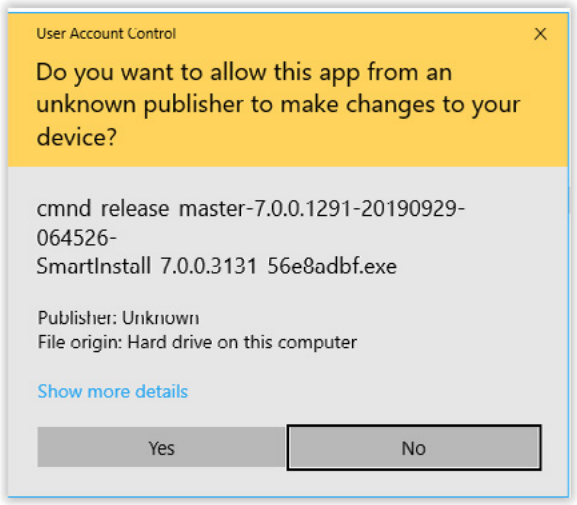
The approval of the CMND account could take up to 48 hours so please take into consideration when applying for a new account.

As soon as you have gotten the password on your newly registered account you can go to the login page again and login using your just created username and password that was send to you.

Installing CMND

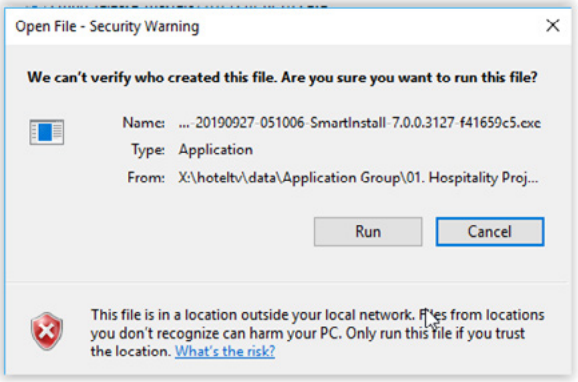
- Download the latest version from the cmnd.io website
- Locate the executable (.exe) in the downloaded folder
- Right click on the executable and run as Administrator. If you don't have administrator rights please contact your IT responsible because CMND **can't** install properly without administrative rights.



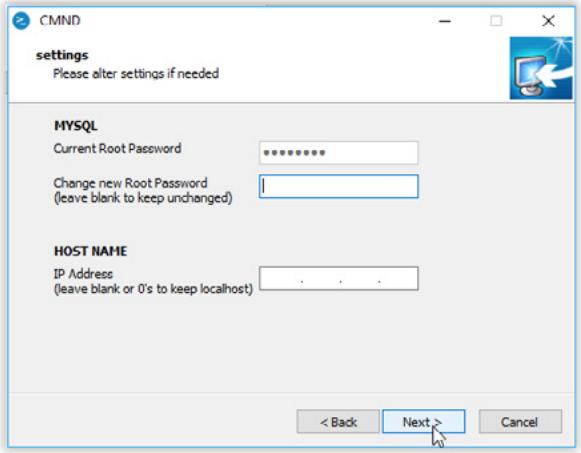


As this is an executable which will add changes to programs, registry settings and so on Windows will show a message to ask if you are sure you wish to run this. Just press “Yes” to continue the installation.

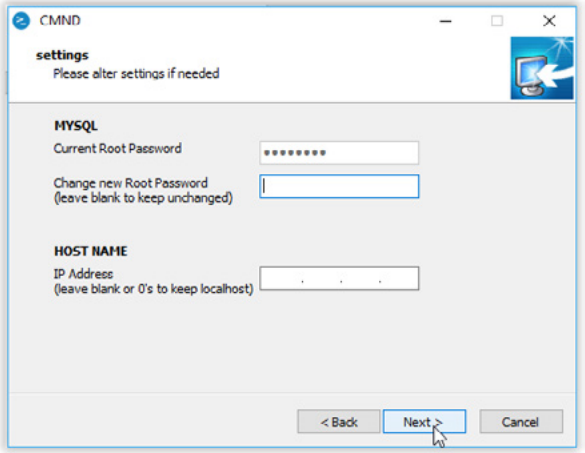
The first screen welcomes you to the CMND installation. There is already an indication of the version number of the release to make sure you are installing the correct one.



Depending on the location of the executable its possible Windows throws another OSD to approve the execution of this file. Press “Yes” to continue the installation.



On the second screen there is some configuration possible. The first item contains the MySQL password for the MySQL database. If you never have installed CMND or SmartInstall before this will be empty and needs to be filled in with a password of your choice. If you are upgrading from SmartInstall or from a previous CMND installation this will be filled in and there is no need to change this.



When running the CMND executable it is possible to upgrade the existing MySQL password. In case you want to do that, make sure to fill in the existing one and also configure the new password.

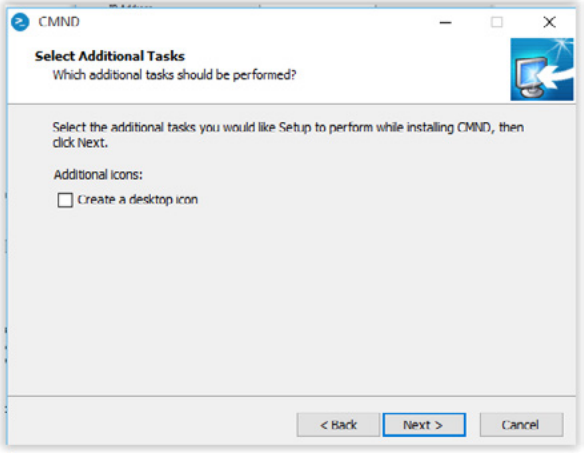
The second part, host name, can be used to install CMND on a specific IP address. When leaving the textbox blank the CMND interface will only be accessible from the PC you installed it on. When using the IP option, you can also reach the CMND interface from another PC in the same network using the IP address you put it in here.

In case you don't fill in any IP address the server UI will be reachable on localhost only. http://localhost:8080/SmartControl

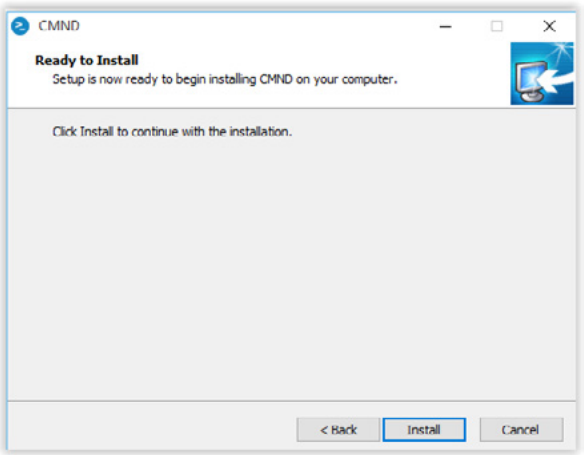
In case you do fill in an IP address for example here 192.168.103.10 then the server UI will be reachable throughout the whole 192.168.103.x subnet. http://192.168.103.10:8080/SmartControl

Of course, the filled in IP address needs to correspond to the actual IP address of the PC on which CMND is installed.

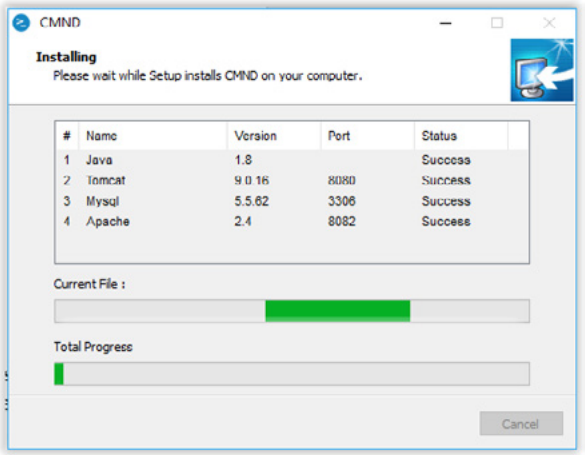
An alternative solution to having remote access to the CMND server could be to install Teamviewer or make use of a remote desktop program.



As a final step before starting the actual installation you can choose to add a desktop icon for CMND.



Now the preparations are finished you are only one press away from installing CMND.

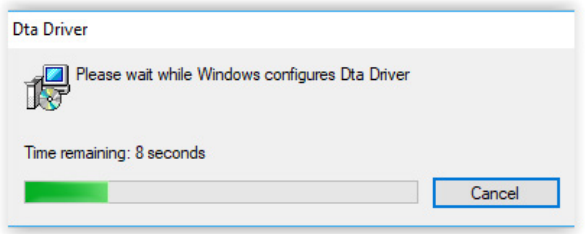


The installation will commence after pressing “Install” and all prerequisites for the CMND software will be installed if not already available.

CMND is built upon 4 pillar programs:

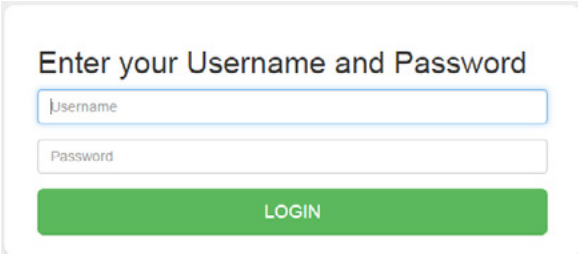
> Apache 2.4
> Tomcat 9
> MySQL 5.5
> Java version 8

In case you are installing this software on a server that already has any of these programs installed you will run into issues as our CMND installer will try to claim the port for all of these programs and possibly will fail to do so. Therefore, we recommend to make sure to install CMND on a system that doesn’t have any of the above packages installed or configured.



It’s possible that besides the main installer window other windows will popup. Please don’t interrupt their processes as they are required libraries for driving the Dektec card.

After successful installation you will see the following screen and after pressing “Finish” the CMND interface will open in your default browser. In case this isn’t Chrome we recommend to change it to Chrome as all development and testing is performed with the Chrome browser.



The default password for CMND is the following:

Username: admin
Password: tpvision

Installing the TV and making a master configuration

Please follow the instructions in the various installation manuals to install a single TV and configure the various settings to your liking. Please test the TV after its setup to make sure you are happy with it. Installation manuals and the latest TV software can be gotten from our support website.

Go to: http://www.philips.com/support

5 **Logging in** to CMND & Control

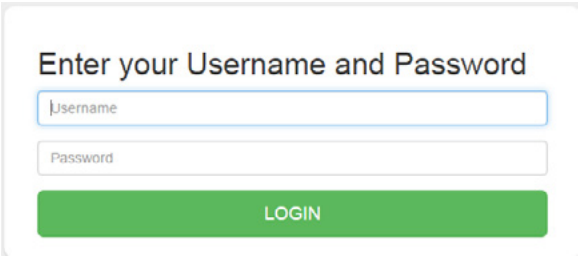
If you are using Internet Explorer please upgrade to Chrome. CMND & Control is an HTML5 based website and Internet Explorer or Edge do not properly support the complete standard and may not work properly. The preferred and fully tested browser is Chrome.

If you haven't created a shortcut on the desktop during the install you can reach the CMND & Control website by typing the following web address in the address bar of the browser. Watch out redirection is case sensitive
http://localhost:8080/SmartInstall/

If you are locally working on CMND & Control server
http://<IP address of server>:8080/SmartInstall/

If you are working remotely, please make sure the CMND & Control server is connected to the internet and proper port forwarding AND VPN or other security is setup

The login page should appear.



Login to CMND & Control with:

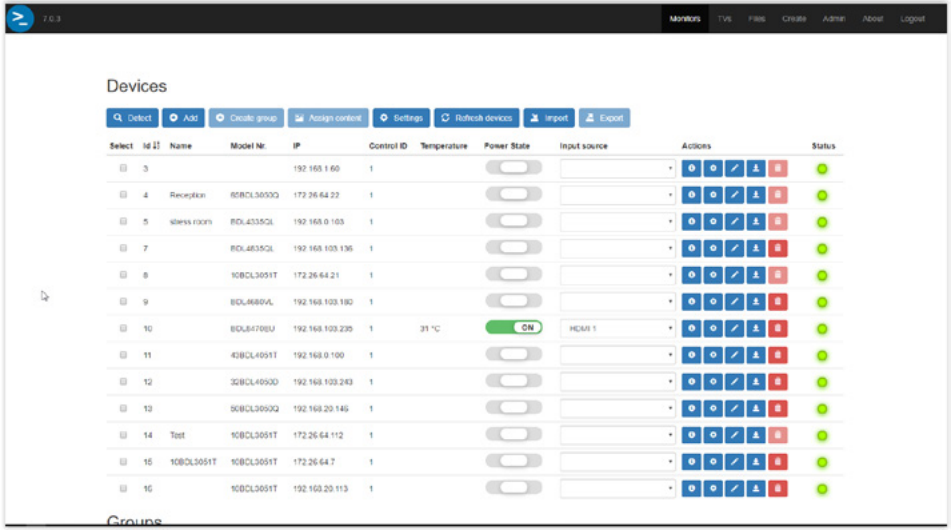
Username: admin
Password: tpvision

6 **Interface** explained

In this chapter we are running through part of the interface in high overview and explain some of the terms used to name the CMND interface

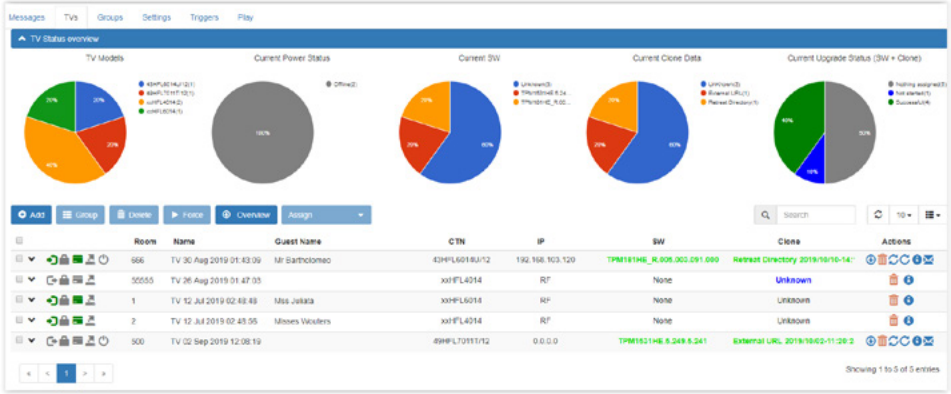
Overall UI

Our CMND software is hosted as a website containing different web applications. To navigate between these applications, you can make use of the main navigation bar (below in black). By clicking any of the items located in this bar you will jump between applications. Jumping applications means you either change your targeted devices (Monitors or ProTv) or jump to the module where you can create websites to deploy.



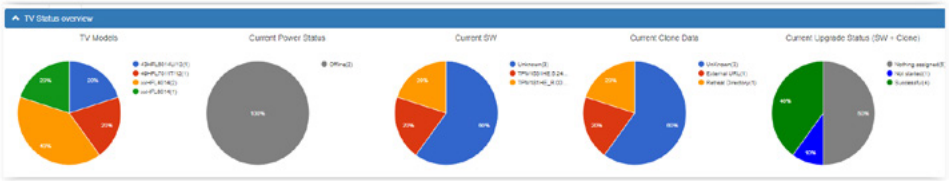
TV overview list

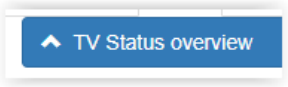
In the TVs tab you can see the Tv overview list. This consists of two parts where at a glance you can assess your current CMND installation and the status of every connected device.



The top part we call the “Pie charts” and show the current status of all connected devices in the form of pie charts. These pie charts can give you a quick overview of the current status of the TV’s. You can see all different models in the location with their power status. The current software and clone they are running and if you pushed an update you can see the progress of those.

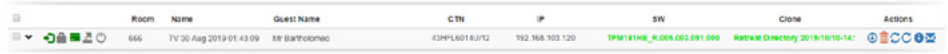
The pie charts are clickable and double up as filters. So, can select slices to filter the Tv list below. You even can combine selections of different pies to make up a combined filter. For example, you could look for all 32HFL5014/12 models which have firmware 2.33 with the purpose of updating them to a newer software.





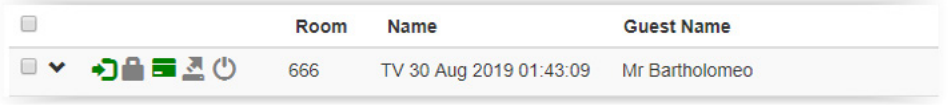
This view can be minimized by clicking on the arrow next to “Tv status overview”

The other part of the interface contains the complete list with added details of all connected devices.



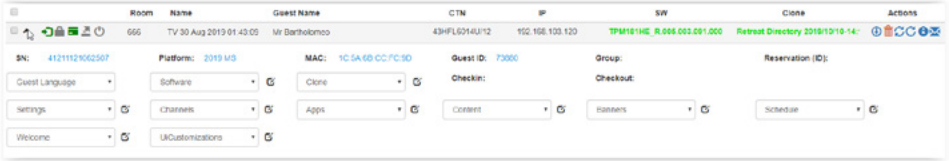
This overview contains enough information to be able to push updates and check some specific room information. This view adds more information that might be handier as an installer like the IP and MAC address of a device, the RoomID and the settype (CTN).

Another major part that has been integrated here is the PMS information when available. You can still use the CMND interface to check in/out guests and you can see their name popping up in the interface directly in line with the TV.



Last but not least there is a “Detail view” available. This view can be reached by clicking open an individual TV using the arrow button located next to the PMS action buttons

The “Detail View” shows very TV specific information like the Serialnumber, some more PMS information if available. And last but not least gives access to our new upgrade mechanism which can assign packages which are immediately forced upon the TV.

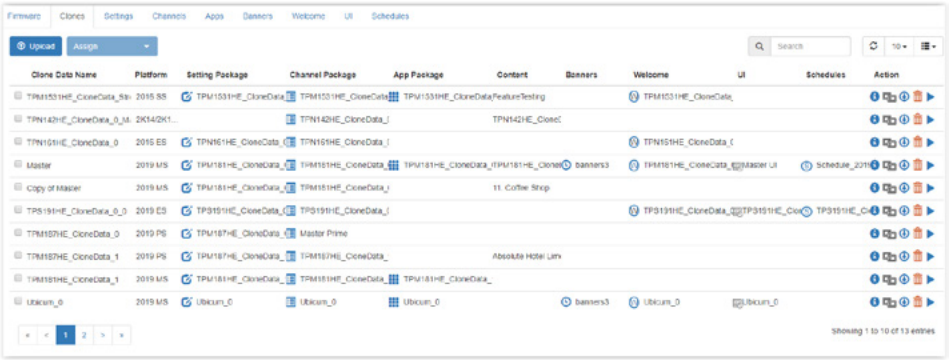


File manager

By clicking on “Files” in the overall navigation bar you’ll reach the File manager where you can manage your Clone files, Firmware and separate packages that make up a clone file.

From the overview you can reach all necessary editors which greatly reduce the amount of effort needed to make changes in your configuration.

Behind every clone file you have added functionality for duplicating, removing, exporting and starting the play out for a certain clone on the RF network.



7 **Adding TV's** to CMND

The first step to be able to get anything done in CMND would be to add your devices to the "Device overview". There are a couple of ways to reach that goal depending on your setup. Please find below an overview of the several paths to take.

From TV side

This choice has been around for a long time already and for many SI's is still the preferred way of working as it gives peace of mind that the initial settings for TV are configured correctly.

Cloning the master clone into a TV via USB. This method makes sure that the WebserviceURL is set into the TV so that the starts polling directly to the server.

Pro's

- Peace of mind
- TV's start polling immediately to the right server

Con's

- If there isn't a server available or the IP of the server might still change during install it's difficult to accommodate for this during TV installation
- Every Tv needs to be flashed locally via USB to make sure it contains the correct settings

From CMND side

In this release of CMND we introduce a couple of new ways to interact with our ProTV portfolio and a couple of these come in handy when adding TV's to the TV overview list.

Pro's

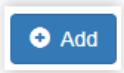
- No TV setup required apart from connecting power and network cable or RF cable
- Centralized configuration

Con's

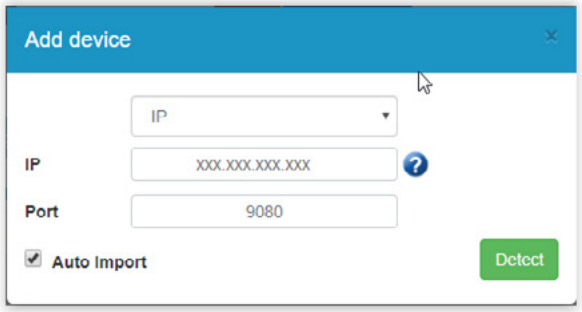
- RoomID can be set via CMND but you will need to match TV and room based on knowledge like MAC or specific IP address

IP

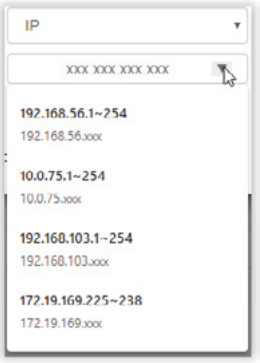
For an IP based system, we integrated a network search that will allow to scan the network from the CMND server and identify any ProTV available on that network segment.



To add a TV, you can press the “Add” button available on the TV overview list. The “Add” button will popup the network wizard and will allow you to add the TV’s available.



Next step would be to choose “IP” as we are trying to add TV’s that have either an ethernet or Wi-FI connection. Then you need to specify the network range you want to check by either entering a single IP address to scan for a single TV or a network range using the format shown in the tooltip to scan a complete range.

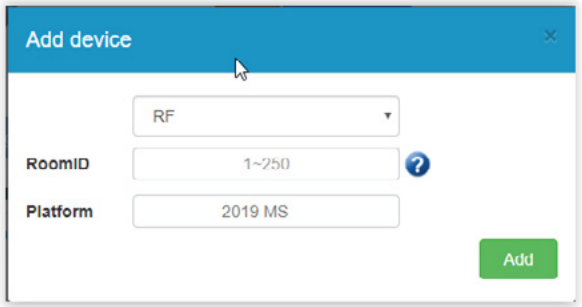


When you install on Windows 10 PC you will also have the ability to select your network interfaces directly from a dropdown list to start scanning for TV’s.

Before pressing “Detect” you still can check the option for “Auto Import”. When checked this feature will automatically add all found TV’s to the TV overview list. If this isn’t desired and you want to be able to select from the TV’s that the CMND server finds you can deselect and change which TV’s are added in the following list overview.

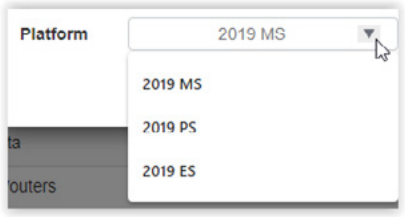
Some remarks

- Detection of TV’s relies on pinging network addresses and checking for the TV Discovery service. If detection fails please check if any internal firewall is preventing any of the two services mentioned above.
- When “adding” a TV the CMND server will actually send out a small clone file that will adjust the WebserviceURL to match the server credentials that performed the search.



RF

TV’s that are connected to the CMND server can only rely on unidirectional traffic. In this case from the CMND server towards to the TV. As we introduced a more granular approach to upgrading TV’s we found it easier to visualize these RF TV’s in a similar manner as the TV’s connected via IP.



For that purpose, we created “RF dummies”. Using the same “Add” button as before and choosing for RF this time you are able to select a platform and add the RoomID of a TV. When pressing “Add” you will see in the TV overview list that a new TV with that platform and RoomID has been added. Of course, if multiple TV’s are required you can also add a complete range of TV’s.

CTN	IP
43HFL6014U/12	192.168.103.120
xxHFL4014	RF

There are small differences seen to identify this TV as being an RF TV. The most obvious one being in the column “IP” where it will mention the keyword “RF”. Using this visual representation similar actions can be performed upon this TV now as you would on an IP connected TV. You can assign clone files, partial clones, firmware and so on. The CMND server will consider the RoomID and will create the appropriate RF stream to match the configuration in the TV overview list.

Some remarks:

- It’s still necessary to have a correct RoomID in the Tv itself as this needs to match with the RoomID configured within CMND. This is key for the communication to work so that the TV picks up the correct RF stream.
- There will be no difference between assigning via the Tv overview list or via the Detail view. Both will create the RF stream and TV will update according to its RF update algorithms. Meaning there is no force update available.

8 File manager

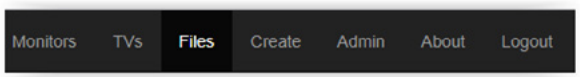
In the file manager you have the opportunity to store and edit the clones and firmware you are using to assign to the Tv's. Clone files consist of a combination of packages which can be added or removed to create a complete clone file. Packages are a standalone group of settings which can range from TV Settings over Channel lists or Content.

Uploading a new clone or a new firmware

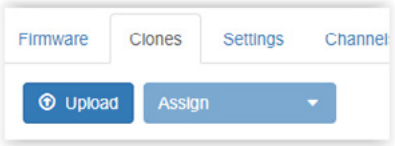
To upload clone data to CMND & Control, you can use the "Clone to USB" function of the TV to start with a master clone with all channels installed during the TV installation. Instructions on how to do this can be found in the installation manuals of the various models.

The clone file from the TV will be in a folder. You need to create a ZIP file of the clone data to upload (local or remotely) to CMND & Control. (http://www.ehow.com/how_5023369_make-zip-file-compressed-file.html)

Make sure the name of the clone folder remains the same (TPN161HE_CloneData for instance). The name of the zip can be anything you wish as long as it has the .zip extension.



Open the "Files" page from the top toolbar and select the "Clones" tab if not already highlighted.

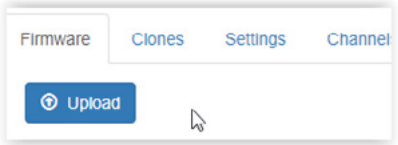


By pressing the "Upload" button you will open the file explorer.

Browse to the zip you wish to upload and press open to load

The clone file is added to the "Clones" library and you will be able to edit it or assign it to TV's.

Clone files are made up from multiple packages which are organized in folders. To be able to upload a clone to CMND it needs to at least consist out of the TV Settings folder and the Channel list. Any additional packages are optional for upload but can be added using the CMND interface.



For firmware's the mechanism is similar. You select the "Firmware" tab and you can click on the "Upload" button. Browse to the .upg file you wish to upload. Press open to load. Firmware is added to the firmware library and you will be able to send it out to TVs.

Managing your clones and firmware's

In the manage files section you can manage both your clone as well as your firmware files:

> You can **Delete** your clones or firmware's by pressing the red thrash button behind the clone or firmware
> *Be careful! There is no undo, once deleted the clone or firmware is permanently removed*

> You can **Download** your clone or firmware by pressing the blue downward arrow. You can use them with another CMND & Control server or store them for backup or support

> You can get more **info** on the clone by pressing the blue “I” behind the clone you wish to know more on. This information window will display the identifiers so you can distinguish your clone files.

> You can **Change the name** of the clone or firmware by clicking on the name. The clicked field will become editable. When you are done, click outside of the edit window to save the name.

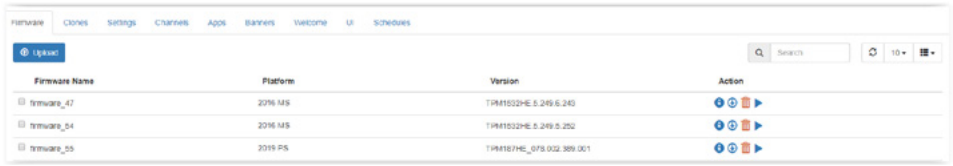
> You can **Edit** the clone or better said the packages by clicking any of the corresponding editors that are available for the Settings, Channels, Apps, Banners, Welcome, UI or schedules.

Version control when uploading firmware

When uploading a firmware version CMND will extract the version number based on the scheme below.

12 digit version ABC.DE**F.GHI**.JKL > 4 digit version as used by CMND & Control **F.GHI**

> TV will **not** accept the 12 number version, therefore you need to keep only the 4 digits **F.GHI**



To edit the firmware version after uploading you can click in the “Version” textbox and make changes where needed. Of course, also here you can edit the name of the firmware as well by clicking the name.

9 Editing **clone files**

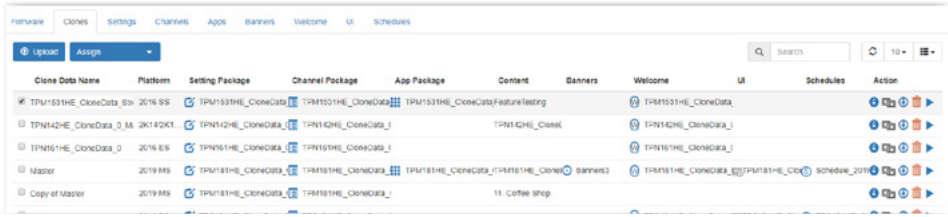
As mentioned above the clone file consist of multiple packages. These can be edited using their respective editor (when available in CMND) or by editing the XML settings file directly.

- The "**Setting Package"** contains the primary settings of your TV. These settings are the items you can find back in the professional menu to configure a TV.
- The **"Channel Package"** will be present in every clone and contains the Tv's channel list. RF, IP and media channels can be configured. The management, editing and so on of the channels can be done using the channel editor.
- The **"App Package**" will allow you to configure and maintain different packages of Android applications. As Android apps are currently only supported on our 5011 and 7011 sets it will only be possible to assign this package to such a clone file.
- The **"Content**" package will contain the SmartInfo pages you've created using CMND or any external pages you wish to distribute using CMND.
- The **"Banners"** functionality will allow you create a banner that will popup on TV and will display certain information or require some form of interaction from the guest in the room.
- The **"Welcome"** package can contain a normal startup image for our Linux based platforms up to a full Welcome APK that can be used as a startup feature of our Android sets.
- The **"UI"** package will allow you to modify the basic dashboard on our latest Android platform to match the customers design guide. The editor will allow you to change logo and colors.
- The **"Schedules"** package will allow you to configure a power on/off sequence for a certain screen in combination with a certain source or startup feature.

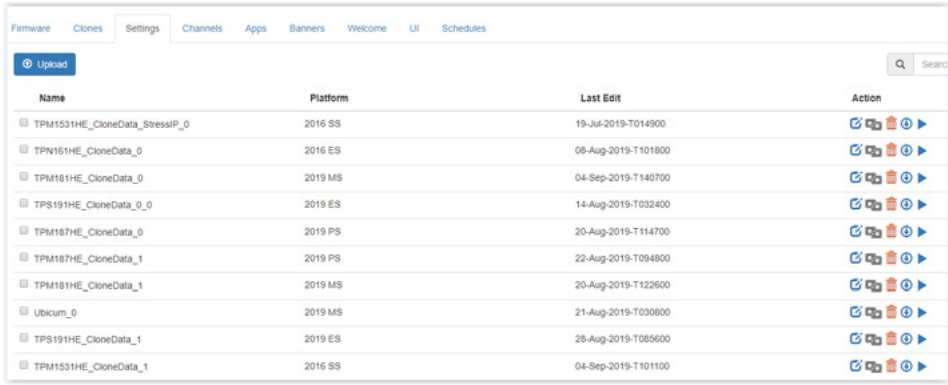
Tv Settings

To work with existing clone data in CMND & Control, you can choose an existing clone file from the clone library.

There are two ways of opening the settings editor either you use the "Clones" overview to identify the clone you want to edit and then use the pen icon to open the editor.

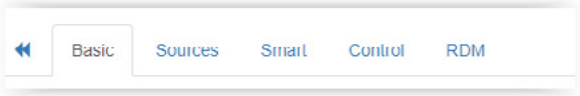


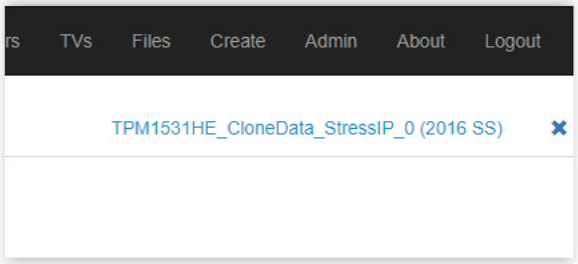
The second option is to move to the "Settings" tab and select the settings package you want to edit.



To change the settings of the selected package you can press the pen icon behind the clone. This will open up the setting editor.

There are multiple tabs in the Settings menu that you can reach by clicking on them. The configuration pages look different for different types of TVs. Examples are below. All changes will be automatically saved to the selected clone file.





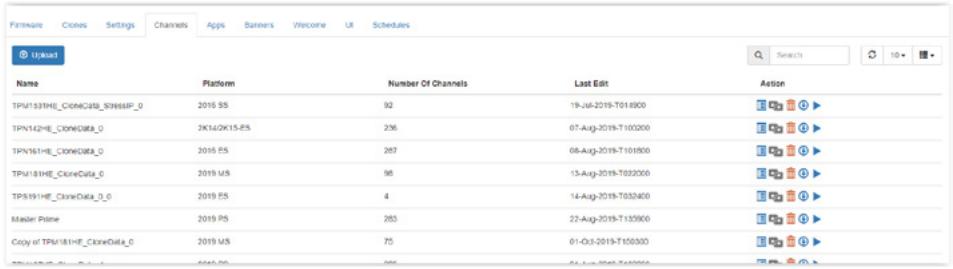
As a reminder on the top right you will see the name displayed of the clone file you are currently editing.

All settings of the TV can be changed on the TV. Most settings can be changed in the CMND editor. All settings can be uploaded and played out over CMND.

For explanations on the various setting, please see the TV manuals.

Channels

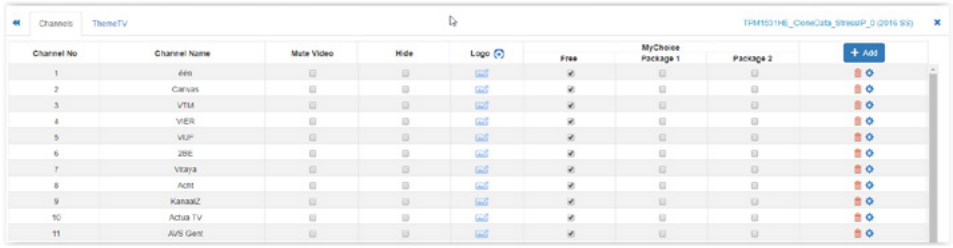
When uploading a clone CMND will take out the existing channel list and list it as a “Channel Package”. These packages make it easier to assign the same channel list to multiple clone files. Managing of these channel packages is done within the tab “Channels” which is available under the “Files” page.



When selecting the “Channels” tab you will see a small overview of all the different “Channel Packages” there are available in your CMND instance. You see the name, the intended platform, the number of channels in the channel list and the last time any change was done to this package.

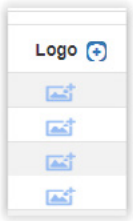
To edit a channel package, you can select the “Channels” icon which will bring you to the channel editor.

Once on this page you can **edit names** by left clicking on them and you can **change the channel number** by clicking on that and changing the number. Don’t forget to save! If you change the channel number to a number of an existing channel, that channel and all channels below it will move a channel down. Empty channels will not move down but will be deleted until the group reaches filled channels again which will move down.



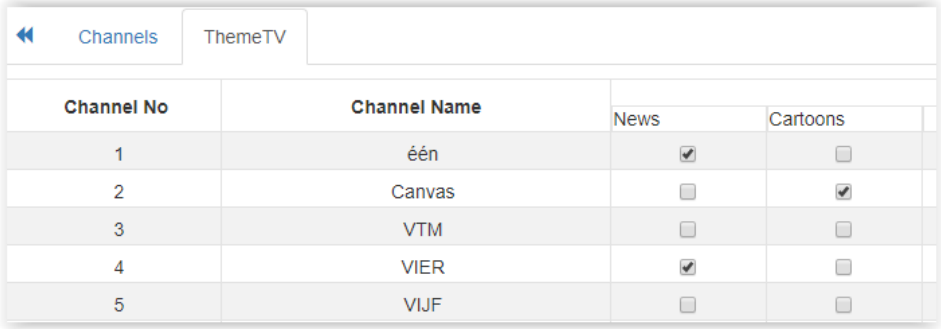
You can **mute video** on channels without video to show a nicer background than a blank screen.

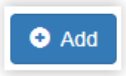
You can **hide channels.** Hidden channels will not be shown on the TV but will remain installed. The functionality is a more dynamical then deleting channels. For example: It allows the TV to understand what to do when the broadcaster sends out new information on a channel.



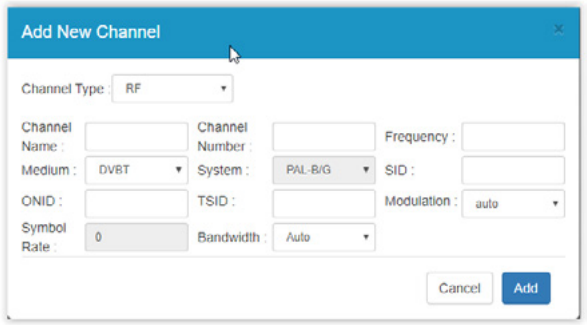
You have the possibillity to override the channel logo that the Tv identifies with a certain channel. This functionality can be used if for instance the TV doesn't have a logo in the local database for a certain channel or if the logo is update and this update isn't reflected within the local database. Of course you can use this feature as well for self created channels which will not be recognized by TV.
You can **add channels to MyChoice** packages.

You can also make use of the ThemeTv editor on selected platforms to create your own groups of channels called themes. These themes make it easier for the guests to locate their favorite channels based on topic, country of origin, intended age group, ...

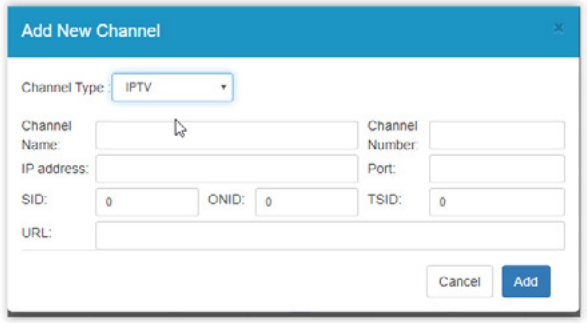




Adding channels
You can manually add channels for RF, IPTV and Media Channels for selective platforms by pressing the "Add" button.

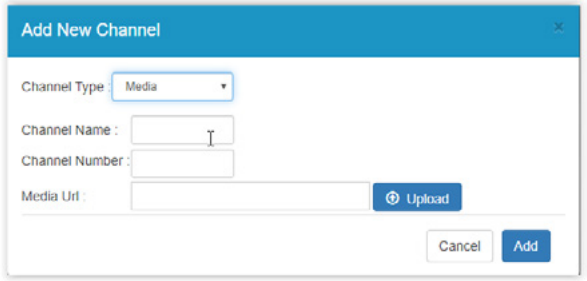


RF
You can add an RF channel when you have all the necessary items that make up a channel like ONID, symbol rate, Frequency and so on. You can fill in every dropdown or textbox and press "Add" to add it to the selected channel number in the list.

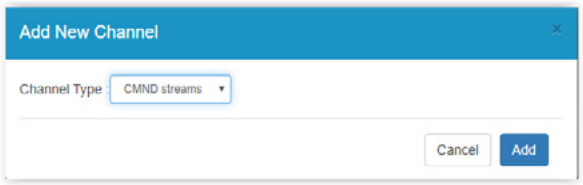


IP
For an IP channel you can perform a similar action as above. In fact, for IP (apart from directly editing the XML) this will be the way to add a channel by default as there is no installation procedure on the TV for IP channels.

You can fill in all textboxes with the required information and CMND will create a full "URL" out of it that it will configure in the Channellist.xml



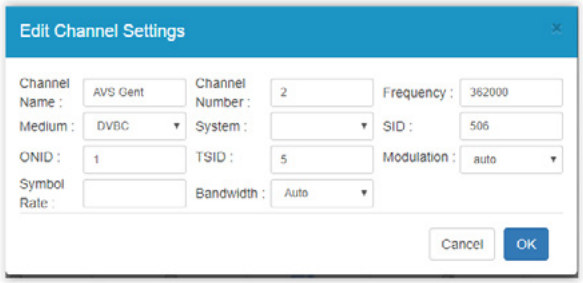
Media
Media channels can be used to display a static image or a video file as part of the channel list. More information can be found in the installation manuals for the platforms that support this feature. You can upload the media you want to display using the "Upload" mechanism. This only consists of a single file. You add a "Channel name" and "number" and it will be part of the channel list.



CMND Stream

The CMND stream that you are able to add to the channel list will be a video file that you add to the update stream over RF that you can configure in the RF playout settings.

Meaning that the RF update signal will be installed as a normal channel but will display the video that's is added in the stream.

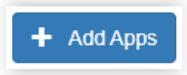


Changing installed channels

By clicking the edit button behind the TV channel name, you open a window with its parameters. Pressing ok will save the new channel information to the clone and overwrite the old. Cancel will keep the old.

Apps

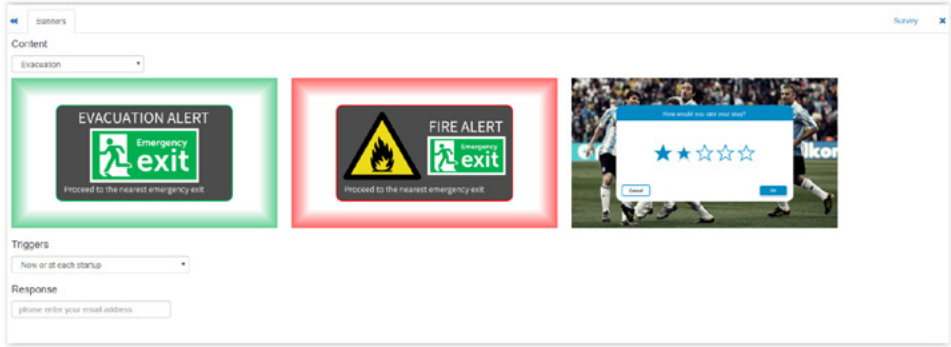
In our apps editor it is possible to add local applications to be installed on a TV. By selecting the editor from either the "Clones" tab or by opening the "Apps" tab immediately you can start configuring the applications.



Using the editor, you can either view cloned out applications or add news ones to an existing clone. It's as simple as pressing the "Add Apps" button and selecting the .apk file of your choosing.

Banners

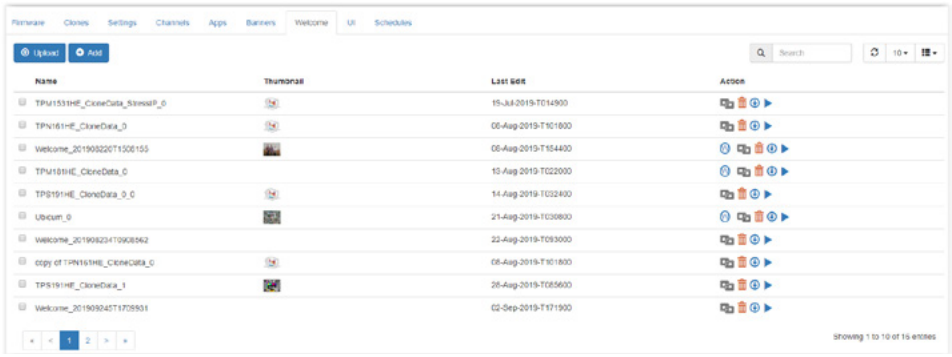
The feature banners is steered from the CMND software and consists of an HTML framework which allows you to open HTML pages onscreen based on certain triggers. The information onscreen can vary from adds over security updates to customer satisfaction surveys. More information on this in the features chapter of this manual.



Welcome logo

To change the welcome logo, you can open the "Welcome" editor by pressing the button on the "Clones" overview or open the "Welcome" tab immediately.

Welcome screen pictures should have the following resolution of 1280X720 / 1920X1080 / 3840X2160 with png or jpg or jpeg format. Please make sure that the intended platform supports the selected format.



support the capability to have an application to be put as welcome screen. Any developer can create a welcome app by extending on the Android DayDream API.

UI

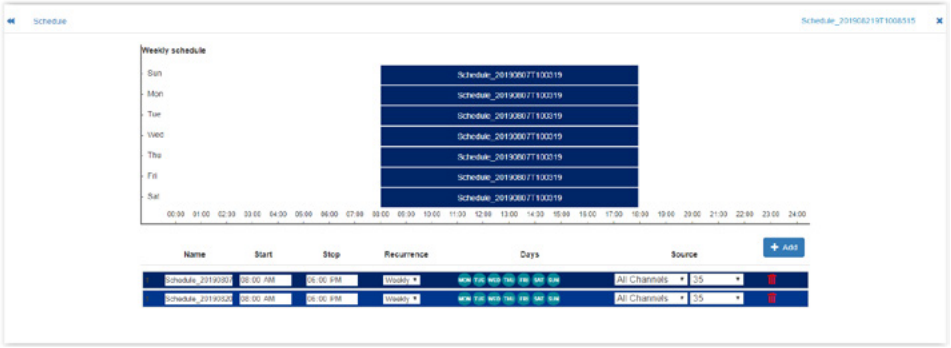
Certain customers require a personalized dashboard to match their design guidelines. In earlier products it was necessary to create a custom dashboard to get a fully customized dashboard. Now it's possible to perform basic color and logo matching using the UI editor in CMND.

In the "DashboardSettings" tab you will be able to select the colors for the dashboard. In the other two tabs "Background" and "Icon" you can choose respectively the background image and the icon displayed in the Dashboard on the top.

Schedules

The last editor we have available is the "Schedules" editor. This editor can be used to create a schedule to power on/off the display you are flashing it on.

The schedules editor is very visual and will display the selected schedules and source for each line added.



10 Upgrading your TV

Once you have created all the packages to configure your TV there is only one step left and that is applying those packages to the target TV's.

There are a couple of ways to update the TV depending on the medium, the packages you want to push and the intended timeframe of the update.

Below we are going through step by step to see how it all works.

To begin we'll make a split up between the medium as this has the highest impact on the process of upgrading. There are two mediums' available for updating a TV (not all platforms support both) RF and IP.

RF

With RF we mean that the TV will receive an update signal over the connected COAX cable. The communication is unidirectional and always from CMND server towards the TV. This has an impact on CMND as we can't retrieve any current status of the TV or know that the TV has updated successfully or not or even when an update has been performed.

Setting it up

To set up the RF stream you can go to the "Play" tab and press the "Settings" button to set up your RF parameters you want to use.

This of course means choosing parameters as frequency and modulation but here you can also get some more information like seeing which versions of Gateway and MGate are installed and which Dektec card is detected.

Additional to setting up the RF stream it's also possible to inject a video signal into the update stream. In the old releases of CMND the update signal only contained a data path well now you have the ability to also include a video path.

When used with our new feature where the TV is able to update in ON state when watching this channel, you have an additional way of pushing configuration changes towards the TV.

You can either add a static AV stream or even inject a live signal so that from guest perspective you wouldn't even see it's an update stream. Both TS streams need to adhere to the DVB specifications to be able to play on the TV.

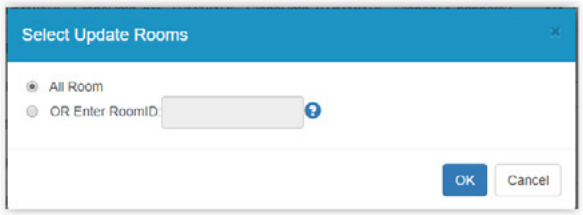
For injecting a live signal make sure that the PC or server where CMND is running is capable to inject a live stream without generating macro blocking otherwise the guest experience will be influenced

Upgrading

To start the RF playout, you need to decide which packages you want to send out. You can initialize playout for a full clone from the "Clones" tab by pressing the play icon next to the clone file.

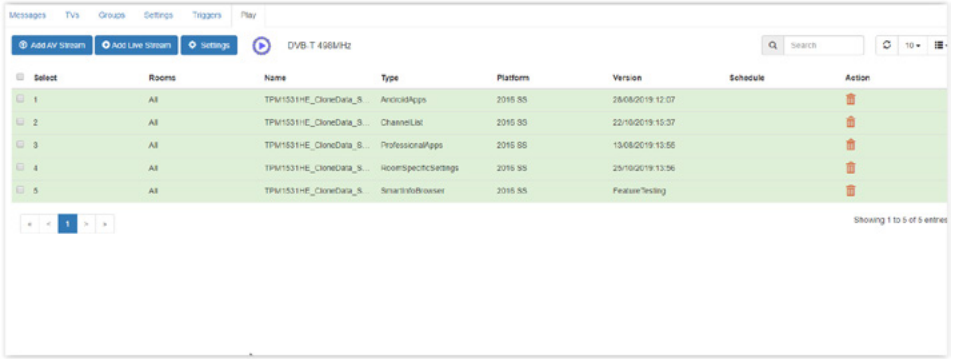
Or you can open any of the package editors and play out a single package by pressing the same icon next to one of the packages

Once you press the play icon you will be asked what the range of Tv's is you want to update at this time. The way to determine which Tv's are going to be updated is by using the RoomID. So first of all, make sure to use a unique RoomID for every installed TV in a single location. This allows for the most granular update approach possible.



If you don't set the RoomID in the TV's you are only left with the possibility to update all rooms at once.

Once you select the range of RoomID's you want to update and press the "OK" button the selected package will be prepared for RF playout and be introduced in the RF stream that's being played out. You can follow this process on the "Play" tab located under the "TVs" page.



In the play tab you will see an overview of all the packages that are currently being played out to your Tv's. Depending on the models you've selected you'll either use Gateway or MGate to drive the RF playout. More on this in the next chapter.

Reading the status of the RF playout is shown with the use of several icons. First you have the overall status of the playout which is indicated on top of the "Play" tab.

When the playout hasn't started the page will indicate this using a play icon with a grey border. It also indicates the chosen frequency where the playout will be broadcasted.

When initializing the RF update signal, after pressing the play icon, it will change to a play icon with a loading animation inserted into the grey circle.

When the overall playout is successfully started this will be indicated by a pause icon with a loading animation in the grey circle.

Looking at the packages itself then you can also see that any package that is successfully playing out is also showing an animation to indicate this.

Frequency

Below you can find an overview of the automatic update behavior of the sets supported by CMND. Using this you can make an estimated guess how long it might take before a complete location is updated. This is only valid for the RF medium. On IP you can set the polling frequency in the Tv to control how often the Tv looks for an update.

TV ranges	After going to standby	Fixed times per day	AutoClone on Wakeup	Continuous update
3009,5009,7009	Yes, 5 min after standby	At 4:00AM	X	X
3010,4010,5010	Yes, 5 min after standby	At 4:00AM	X	X
3011	Yes, 5 min after standby	At 4:00AM	V	X
5011,7011	Yes, 5 min after standby	At 4:00AM	V	X
4014,5014,6014	Yes, 5 min after standby	At 1:00PM At 4:00AM	V	V

For 2016 MediaSuite and Signature models a clone feature was added namely "autoclone on wakeup". Meaning that if set to on the Tv will also look for updates when the Tv is powered on by the guest. This update can be used for small changes in for instance the channel list or use with the PMS system.

For our latest range (4014,5014,6014) we also introduced continuous updates. This feature will allow for continuous monitoring of the RF update stream when the TV is in fast mode and standby or even when it's in ON state*.

**Firmware update might be required to unlock this possibility in the TV.*

Gateway vs MGate

In CMND certain elements are put in place to be able to drive the Dektec card to modulate an RF signal on the network. We have of course the Dektec drivers, the CMND UI and so on. One very important part is the library that determines how to build up the RF signal so that our Tv's can pickup a new firmware or clone file.

With the introduction of a more granular RF update mechanism in our TV's we introduced a new library that can cope with this added functionality. This library we call MGate (short for multiplexing Gateway).

Gateway
This library is driving the older platforms and is limited to send out a clone and/or firmware to a single or a range of TV's of a single platform.

Meaning that if the hotel has a mix of TV types containing different platforms an upgrade strategy needed to be in place to upgrade each platform separately.

MGate
The new library will allow for an improved user experience by providing a more granular approach in combination with multiplexing. The resulting RF output stream isn't limited to play out to just a single Tv, range of RoomID's or platforms anymore!

To give a small example
I have a hotel containing two platforms that support MGate for example 15 x HFL4014 and 10 x HFL6014.

Old scenario
As 4014 and 6014 are different platforms I could only send out an RF stream that would update a single platform. This stream could contain clone and or firmware and could be sent to a specific RoomID in case there was no firmware present. So, after playout of the first configuration and waiting for all TV's to get the new config you could start with creating and playing out the RF update stream for the other platform. This is time-consuming and requires at least a couple of interactions with the server over the course of a couple of days.

New Scenario
Due to added multiplexing capabilities of MGate it's now possible to add a clone and or firmware to the same RF update stream. Meaning I can set up a new clone for room 200 (HFL4014), send out a firmware to room 201 (HFL4014) and upgrade the channel list of Room 202-212 (HFL6014) all in the same stream. You set up all parameters and you can start the playout. Each individual Tv will check based on RoomID in the RF stream for any updated elements that are available.

IP

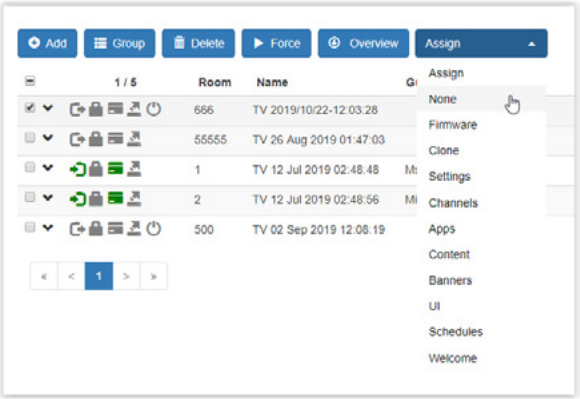
The second way to update our TV's is over an IP connection. Meaning that the TV is connected either over ethernet or Wi-Fi on the same network where the CMND server is located on. Once the TV is claimed by the CMND server or pointed towards the server the bidirectional communication starts.

This means that you can actually ask the TV questions like "What's your current software version?" or "Which SmartInfo Pages do you have currently stored?". The answers to these questions are shown in the TV overview list.

Setting it up
Setting up the upgrade mechanism for an IP upgrade just entails that your WebserviceURL in the TV is correct and that all network related services are turned on. Once you have that configured you are ready to start pushing updates.

Upgrading
As with RF also our IP upgrade mechanism has a heartbeat that runs through the whole upgrading process. This polling frequency you can configure in the "Settings" tab. Depending on the time chosen here the communication between the server and the TV will either be sped up or slowed down. Depending on your installation and the desired accuracy of the CMND overview you can lower or increase these values to your liking.

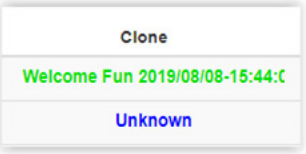
This heartbeat will make sure that the TV at the configured time interval will check with the server if there is any new upgrade package available for download. Of course, the TV will only pick up the package when it doesn't influence the guest.



To configure an update to follow the heartbeat updating mechanism you simply select your target device(s) from the Tv overview list and press the "Assign" button, choose your desired package to update and click on it.

Selecting "None" will always allow you to revert any configuration that you might assigned incorrectly.

Depending on the platform selected the dropdown list of the "Assign" button might have different values.



Once assigned a color-coding scheme will be applied to follow the upgrade progress. Once a package is assigned the "Clone" column will change to blue indicating the name of the package configured for update. Once the TV takes note of the update (next heartbeat) it will change to orange. Then once the TV indicates that it's ready for upgrade the server will send over URL's where the TV can download the update packages.

Once this happens a loading animation will appear behind the selected TV for the remainder of the upgrade progress.

Once the progress is finished the "Clone" will contain the name of the assigned packaged indicated in green.

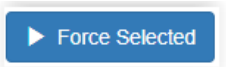
If for some reason the TV fails to upgrade the package successfully for instance when a guest powers on the TV during an update the CMND server will retry 3 times to send the URL's towards the TV. If these all fail then the "Clone" column item will sport a red color to indicate a failure.

Now there is also a second mechanism at play! Previously we indicated that a TV will only update once the heartbeat indicated an update and that the TV was ready for upgrade (meaning it won't influence a potential guest working with the TV).

Now there is also a way around that in case you want to force an update upon the TV('s). There a several ways of achieving this.

1. Once you have a package selected for a device you can press the "Start Upgrading" button which is located behind every IP connected in your TV overview list.

2. In the Tv overview list you also have your detailed view of each TV. Any package assigned using the detailed view pane will be forced immediately on the TV.



3. If you have multiple devices you want to expedite the upgrade for you can mark them in the first column of the TV overview list and press the "Force Selected" button.

Any TV that has skipped a couple of heartbeats will be indicated as being offline. This means that there is no communication between the TV and the server and will result in the inability to update this TV.

TV ranges	Gateway	MGate
3009,5009,7009	V	
3010,4010,5010	V	
3011	V	
5011,7011	V	
4014,5014,6014		V

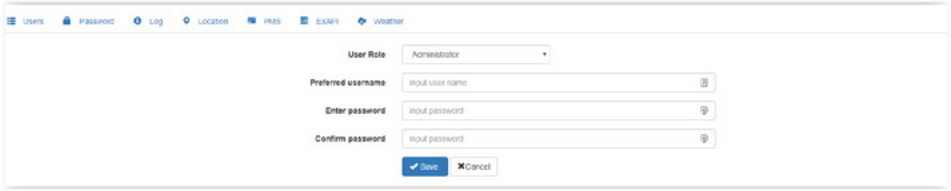
11 **Administering** CMND

This section of CMND can be used to administer it. Meaning you can perform some user management, set up a PMS connection, and fill out the About page amongst other things. Find below a more extensive explanation of the actions that can be performed.

Creating new users

The default user is the admin user. As administrator you can create new users, both new administrators (that can do everything) and normal users (That can do everything except create new users and reset passwords)

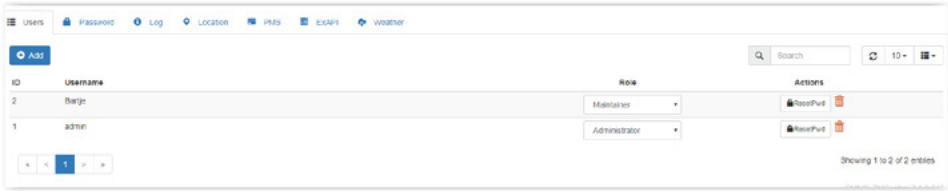
There are two types of normal users. Being a “user” and a “Maintainer”. A “User” has the same abilities as the administrator minus the possibility to create users. A “Maintainer” role is useful in the Create part of CMND where it will limit the amount of data that the maintainer can change. This is limited per element that is placed on the website.



Editing users

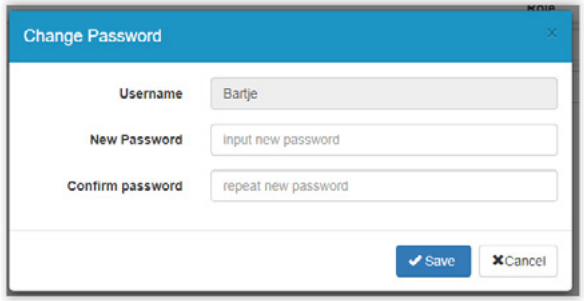
As administrator you can edit and delete users

Please change your administrator password to a password of your own choosing!
Please press save to save the changes



Change password

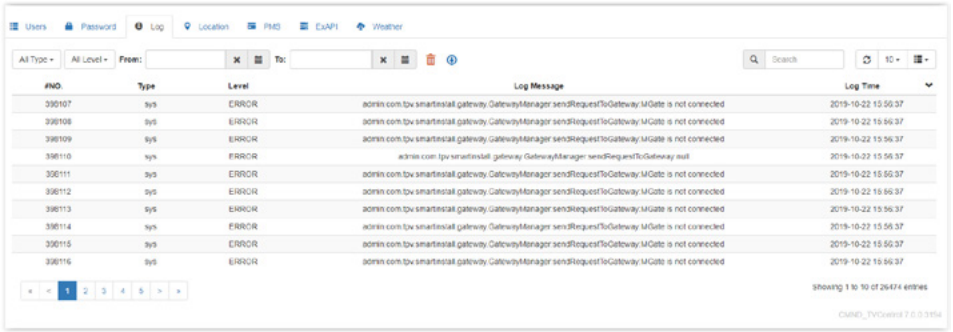
Here you can change the password of the logged in user.



Please change your administrator password to a password of your own choosing! Please remember this password as there is currently no way to recover a forgotten password.

System log

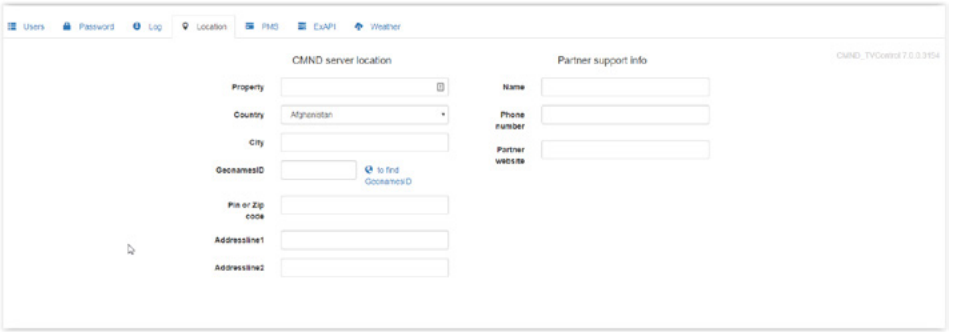
The system log shows information about the functioning of CMND

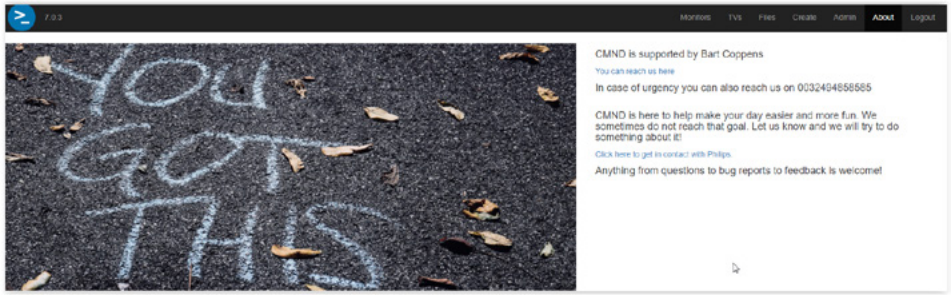


Location configuration

To be able to recognize which CMND & Control you are connecting with, you can add a location to the server. The geonamesID of a certain location can be gotten from the http://www.geonames.org/search.html website. It helps in determining exact location for services such as weather.

In addition to the information above this form can also be used by an SI to make known to the endcustomer who he needs to contact when something occurs with the CMND server. By filling in the Partner support info the About page will be populated with the necessary information. As per example below.





PMS

In this tab you are able to setup any PMS connection towards a TigerTMS or Oracle PMS server. All additional configuration of PMS and what each feature means can be found back in our other manual called “CMND & Check-In” where we go indepth in how to set up a connection between CMND and TV’s so that we can make use of the additional information in the hotel’s PMS system to enrich the guest experience.

ExAPI

In the ExAPI tab you can set up a connection to be able to integrate any tool that wishes to communicate with CMND. Headend or custom dashboard suppliers can use this API to make use of some features that live within CMND like the upgrade mechanism without the need to build it themselves from the ground up.

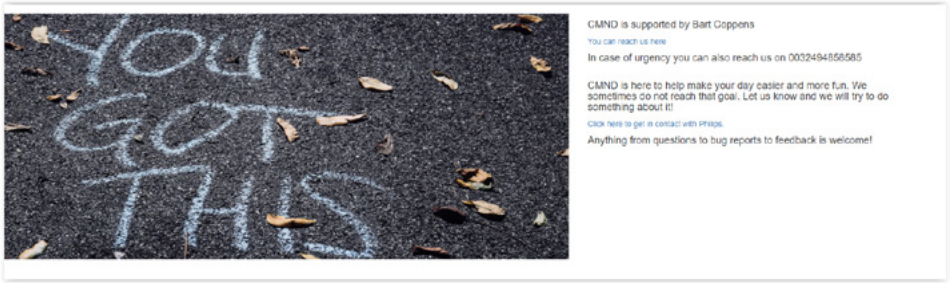
Weather configuration

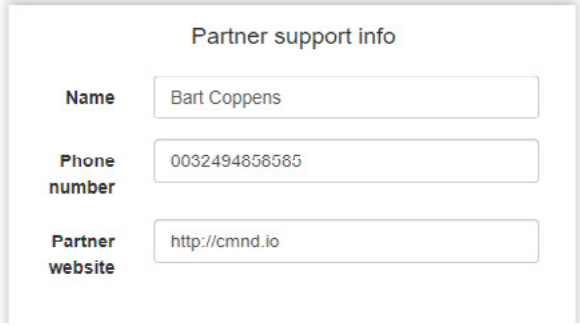
When you enable the weather in this menu, CMND will be able to update weather information on TVs setup to get this information. To determine the location of the weather, the geonamesID in Location config should be set.

This module is still under development and might not function completely as of now

About

The about page is an extra page we've added towards our installers. They can make use of this page to instruct their clients if any would get to the UI or actually use it on a daily basis but they are struggling with the actions they need to perform. They can use this page to find any contact information for assistance.





The configuration of name, phone number, URL and so on can be found under the "Admin" page in the "Location" tab.

Here you can fill in the partner support info so that your client knows how to reach you.

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